



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,635	10/01/2003	Akm N. Islam	5681-68500	7871
58467	7590	04/29/2008		
MHKKG/SUN P.O. BOX 398 AUSTIN, TX 78767			EXAMINER NGUYEN, THANH T	
			ART UNIT 2144	PAPER NUMBER
			MAIL DATE 04/29/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/676,635

Applicant(s)

ISLAM ET AL.

Examiner

Thanh Tammy Nguyen

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date July 3, 2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

Detailed Office Action

1. This action is in response to most recent papers received.
2. Claims 1-20 have been examined

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negative by the manner in which the invention was made.

4. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leymann et al., (hereinafter Leymann) U.S. Patent No. 6,928,477 in view of Grinter et al., (hereinafter Grinter) U.S. Patent No. 6,606,304.
5. As to claims 1, 9, and 17, Leymann teaches the invention as claimed, Leymann discloses including a plurality of servers in a cluster [see fig.1, cluster 120], wherein each server comprises a timer service and an instance of one or more applications [see fig.1, application server116, 113, and

110];

a failure detection service operable to detect a failure in the plurality of servers in the cluster [see col. 9, lines 20-36] (*when one of the server of application cluster falls the watchdog on this server will be detected to have failed by other watchdog*); wherein operable to:

service timer requests from the one or more application instances on its server [see col.9, lines 29-36] (*new requests can be submitted to recreated server*) ; and in response to the failure detection service detecting a failure, assume one or more timer operations from a failed timer service in the cluster [see col.9, lines 29-36] (the responsiveness of the cluster by detect as soon as the became available). However, Leymann does not explicitly disclose timer service.

6. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
7. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
8. As to claim 2, Leymann teaches the system of claim 1, wherein each timer service is further operable to: wait for a specified time period prior to assuming the one or more timer operations from a failed in the cluster after the failure detection service detects a

- failure [see col. 9, lines 10-35]. However, Leymann does not explicitly disclose timer service and only assume the one or more timer operations if the failed timer service does not recover within the specified time period.
9. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*) and only assume the one or more timer operations if the failed timer service does not recover within the specified time period [see col. 8, lines 15-21] (*failure to return within a specified time period*).
10. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, and only assume the one or more timer operations if the failed timer service does not recover within the specified time period, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
11. As to claim 3, Leymann teaches the system of claim 1, wherein upon assuming the one or more timer operations from a failed timer service, the operable to provide any missed timer notifications to one or more of the application instances [see fig.1]. Leymann does not explicitly disclose timer service.
12. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).

13. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
14. As to claim 4, Leymann teaches the system of claim 3, wherein each timer service assuming the one or more timer operations from a failed timer service is operable to deliver any missed notifications of timer operations to a fail-over instance of the application [see col.9, lines 35-36].
15. As to claim 5, Leymann teaches the system of claim 1, further comprising a timer database operable to store information on one or more timer operations [see fig.1].
16. As to claim 6, Leymann teaches the system of claim 5, wherein each timer service is operable to acquire the information on the one or more timer operations from the timer database upon assuming the one or more timer operations from the failed [see col.9, lines 19-22]. Leymann does not explicitly disclose timer service.
17. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
18. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for

- the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
19. As to claim 7, Laymann teaches the system of claim 1, wherein each server comprises the failure detection service [see col.9, lines 19-22].
20. As to claim 8, Laymann teaches the system of claim 1, wherein each timer operation of the failed is assumed by only one active in the cluster [see col.9, lines 10-36]. Leymann does not explicitly disclose timer service.
21. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
22. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
23. As to claim 10, Leymann teaches method of claim 9, further comprising: waiting for a specified time period prior to said assuming the one or more timer operations from the failed in the cluster after said detecting a failure [see col.9, lines 20-23]. However, Leymann does not explicitly disclose timer service and only assume the one or more timer operations if the failed timer service does not recover within the specified time period.

24. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*) and only assume the one or more timer operations if the failed timer service does not recover within the specified time period [see col. 8, lines 15-21] (*failure to return within a specified time period*).
25. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, and only assume the one or more timer operations if the failed timer service does not recover within the specified time period, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
26. As to claim 11, Leymann teaches the method of claim 9, further comprising providing any missed timer notifications to the one or more application instances upon assuming the one or more timer operations from the failed [see col.9, lines 20-22]. Leymann does not explicitly disclose timer service.
27. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
28. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for

- the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
29. As to claim 12, Leymann teaches the method of claim 11, wherein said providing any missed timer notifications to the one or more application instances comprises delivering any missed notifications to a fail-over instance of the application [see col.9, lines 42-59].
30. As to claim 13, Leymann teaches the method of claim 9, further comprising storing information on one or more timer operations in a timer database [see fig.1].
31. As to claim 14, Leymann teaches the method of claim 13, further comprising acquiring the information on the one or more timer operations of the failed from the timer database upon said assuming the one or more timer operations from the failed [see col.9, lines 20-23]. Leymann does not explicitly disclose timer service.
32. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
33. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
34. As to claim 15, Leymann teaches the method of claim 9, wherein each server of the cluster comprises a timer service and a failure detection service to detect failures of

- other servers of the cluster [see col.9, lines 10-36]. Leymann does not explicitly disclose timer service.
35. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
36. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
37. As to claim 16, Leymann teaches the method of claim 9, wherein each timer operation of a failed timer service is assumed by only one active in the cluster [see fig.1]. Leymann does not explicitly disclose timer service.
38. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
39. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].

40. As to claim 18, Leymann-Grinter teaches the computer accessible medium of claim 17, wherein each instance of the distributed timer service is further configured to: wait for a specified time period prior to said assuming the one or more timer operations from the failed timer service instance in the cluster after receiving said notification; and only assuming the one or more timer operations if the failed timer service does not recover within the specified time period [see Grinter, col.8, lines 1-67, and col.13, 24-47].
41. As to claim 19, Leymann teaches the computer accessible medium of claim 17, wherein each instance of the distributed timer service is configured for providing any missed timer notifications to the one or more application instances upon assuming the one or more timer operations from a failed [see col.9, lines 10-36]. Leymann does not explicitly disclose timer service.
42. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
43. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].

44. As to claim 20, Leymann teaches the computer accessible medium of claim 19, wherein said providing any missed timer notifications to the one or more application instances comprises delivering any missed notifications to a fail-over instance of an application that had originally requested the timer operation from the failed [see col.9, lines 43-59]. Leymann does not explicitly disclose timer service.
45. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
46. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
47. As to claim 21, ---- teaches the computer accessible medium of claim 17, wherein each instance of the distributed is configured to store information on one or more timer operations in a timer database [see fig.1]. Leymann does not explicitly disclose timer service.
48. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
49. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for

- real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
50. As to claim 22, Leymann teaches the computer accessible medium of claim 21, wherein each instance of the distributed timer service is configured to acquire information on the one or more timer operations of the failed timer service instance from the timer database upon assuming the one or more timer operations from the failed [see col.9, lines 20-23]. Leymann does not explicitly disclose timer service.
51. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
52. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].
53. As to claim 23, Leymann teaches the computer accessible medium of claim 17, wherein is configured to run on each server in the cluster [fig.1].
54. As to claim 24, Leymann teaches the computer accessible medium of claim 17, wherein the instance is configured to not assume a particular timer operation of the failed instance if another timer service instance in the cluster has already assumed

that timer operation [see col.9, lines 10-39]. Leymann does not explicitly disclose timer service.

55. In the same field endeavor, Grinter discloses (e.g., system for real-time monitor and response). Grinter discloses timer service [abstract, and col.13, lines 23-47] (*watchdog checks the time and date stamp*).
56. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have the teaching of Grinter a system for real-time monitor and response with Leymann's teachings to have a timer service, for the purpose of monitoring and keeping track of the proper operation of any unattended service [see col.5, lines 20-22].

Conclusion

57. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy T. Nguyen whose telephone number is 571-272- 3929. The examiner can normally be reached on Monday - Friday 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ***William Vaughn*** can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2144

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh Tammy Nguyen/

Thanh Tammy Nguyen

Primary Examiner, Art Unit 2144